

Distinctive Characteristics

Full face or spot illumination with incandescent lamps or multi-element LEDs, with or without resistors.

Choice of super bright LEDs in white, green, and blue as well as bright LEDs in red, amber, and green.

Combination bezel-barrier is an integral part of the switch and prevents accidental actuation.

Unique thermoplastic elastomer seal inside caps plus rolled sleeve of nitrile butadiene rubber at joining of housing and inner case, all for added protection to interior mechanism.

Dust and oil tight as well as splashproof panel seal models qualify to IP65 of IEC60529 Standards (similar to NEMA 4 and 13). Panel seal models provided with exterior o-ring.

Distinctive design of snap-action contacts for shock resistance, long life, and sensitive actuation.

High density design to give behind panel depth of less than one inch.

Terminals are epoxy sealed to lock out flux, dust, solvents, and other contaminants.

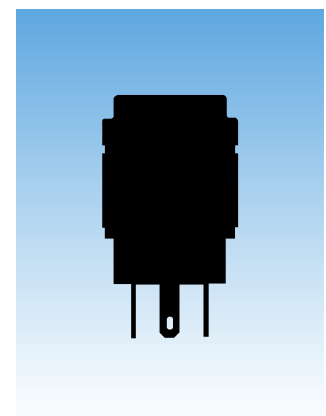
Latchdown for indication of circuit status, plus audible, tactile feedback with smooth, responsive operation.

Nonilluminated models available and shown in the Pushbutton section.

Matching indicators available and shown at the end of Section M.



Actual Size



General Specifications

Electrical Capacity (Resistive Load)

Power Level (silver): 3A @ 125V AC or 3A @ 250V AC or 3A @ 30V DC
Logic Level (gold): 0.4VA maximum @ 28V AC/DC maximum
 (Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)
 Note: Find additional explanation of operating range in Supplement section.

Other Ratings

Contact Resistance: 50 milliohms maximum for silver; 100 milliohms maximum for gold
Insulation Resistance: 200 megohms minimum @ 500V DC
Dielectric Strength: 1,000V AC minimum between contacts for 1 minute minimum;
 1,500V AC minimum between contacts & case for 1 minute minimum
Mechanical Life: 1,000,000 operations minimum for momentary circuit
 200,000 operations minimum for maintained circuit
Electrical Life: 100,000 operations minimum
Nominal Operating Force: Single pole: 1.47N for nonsealed; 1.67N for sealed
 Double pole: 2.75N for nonsealed; 2.94N for sealed
Contact Timing: Nonshorting (break-before-make)
Travel: Pretravel .059" (1.5mm); Overtravel .059" (1.5mm); Total Travel .118" (3.0mm)

Materials & Finishes

Housing/Bezel: Glass fiber reinforced polyamide (UL94V-0)
Snap-in Frame: Stainless steel
Base: Diallyl phthalate resin (UL94V-0)
Movable Contactor: Phosphor bronze with silver or gold plating
Movable Contacts: Silver alloy with silver plating or brass with gold plating
Stationary Contacts: Silver alloy or copper with gold plating
Switch Terminals: Phosphor bronze with tin plating
Lamp Terminals: Phosphor bronze with tin plating

Environmental Data

Operating Temp Range: -25°C through +50°C (-13°F through +122°F)
Humidity: 90 ~ 95% humidity for 96 hours @ 40°C (104°F)
Vibration: 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours
Shock: 50G (490m/s²) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)
Sealing: IP65 of IEC60529 standard for panel seal models

Installation

Mounting Torque: 0.80Nm (7.08 lb•in) maximum
Soldering Time & Temperature: Manual Soldering: See Profile A in Supplement section.

Standards & Certifications



Flammability Standards: UL94V-0 housing & base



UL & C-UL Recognized:

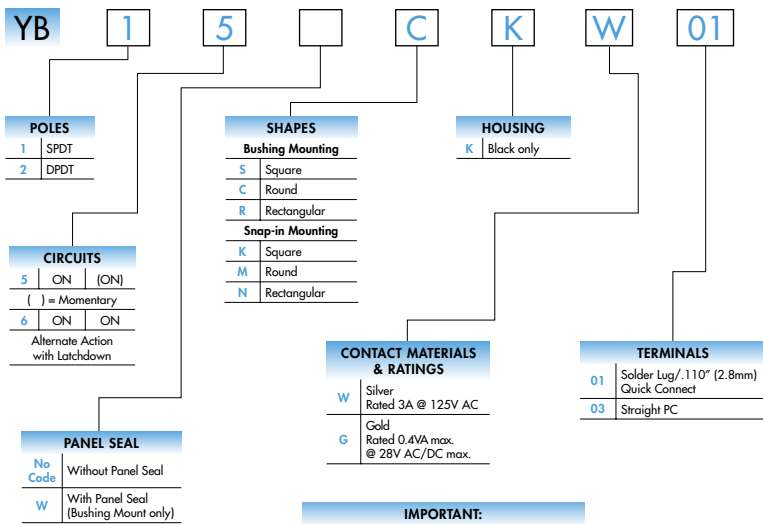
All solder lug models recognized at 3A @ 125/250V AC or 0.4VA @ 28V AC/DC maximum;
 UL File No. WOYR2.E44145; add "/U" to end of part number to order UL mark on switch;
 UL File No. WOYR8.E44145; add "/C-UL" to end of part number to order C-UL mark on switch.



CSA Certified:

All solder lug models certified at 3A @ 125/250V AC or 0.4VA @ 28V AC/DC maximum;
 CSA File Nos. 023535-0-000; add "/C" to end of part number to order CSA mark on switch.

TYPICAL SWITCH ORDERING EXAMPLE




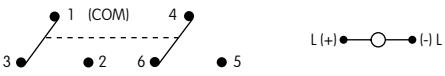
IMPORTANT:
Switches are supplied without UL, C-UL, & CSA markings unless specified. Specific models & ratings noted on General Specifications page.

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE
YB15CCKW01-6F-JB



| LAMPS | | CAP TYPES & COLORS | |
|--|-----------|---|----------------------|
| Incandescent Lamp | | Solid Cap: Lens/Insert Colors | |
| 05 | 5-volt | BB | White/White |
| 12 | 12-volt | CB | Red/White |
| | | EB | Yellow/White |
| | | FB | Green/White |
| | | GB | Blue/White |
| LED for Spot Illuminated Cap | | Spot Illuminated Cap: Lens/Insert Colors | |
| LED Colors | | Forward Voltage | |
| 1C | Red | 02 | 2-volt (no resistor) |
| 1D | Amber | 05 | 5-volt |
| 1F | Green | 12 | 12-volt |
| 1CF | Red/Green | 24 | 24-volt |
| Bright LED | | LED Cap: Lens/Insert Colors | |
| LED Colors | | Resistor | |
| 5C | Red | No Code | No Resistor |
| 5D | Amber | 05 | 5-volt |
| | | 12 | 12-volt |
| 5F | Green | 24 | 24-volt |
| Super Bright LED | | LED Cap: Lens/Insert Colors | |
| 6B | White | JB | Clear/White |
| 6F | Green | | |
| 6G | Blue | | |
| Bicolor LED for Full Face Illuminated | | LED Cap: Lens/Insert Colors | |
| LED Colors | | Forward Voltage | |
| 2CF | Red/Green | 02 | 2-volt (no resistor) |
| | | 05 | 5-volt |
| | | 12 | 12-volt |
| | | 24 | 24-volt |
| | | JB | Clear/White |

POLES & CIRCUITS

| Pole | Model | Plunger Position () = Momentary | | Connected Terminals | | Throw & Switch/Lamp Schematics |
|------|---------------|-------------------------------------|------------|---------------------|---------|--|
| | | Normal | Down | Normal | Down | |
| SP | YB15 *YB16 | ON ON | (ON) ON | 1-3 | 1-2 | Notes: Switch is marked with NC, NO, COM, L+, L-. Lamp circuit is isolated and requires external power source.  |
| DP | YB25 *YB26 | ON ON | (ON) ON | 1-3 4-6 | 1-2 4-5 |  |

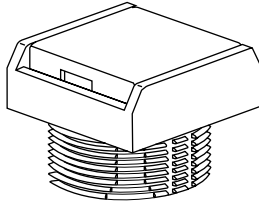
* When in latchdown position for the alternate circuit, cap position is .020" (0.5mm) above the built-in bezel.

PANEL SEAL

No Code

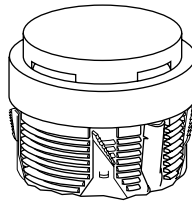
Without Panel Seal

Bushing
Mounting



Supplied with mounting nut.

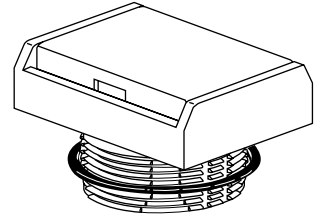
Snap-in
Mounting



W

With Panel Seal

Bushing
Mounting
only



Supplied with mounting nut and o-ring AT089.

SHAPES & MOUNTING TYPES

Bushing Mounting

Snap-in Mounting

S Square

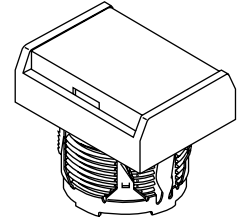
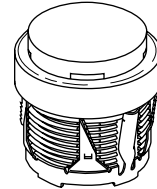
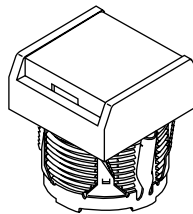
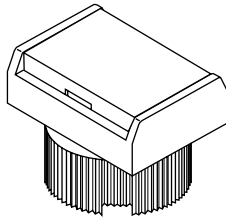
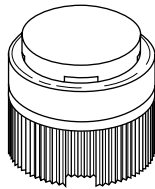
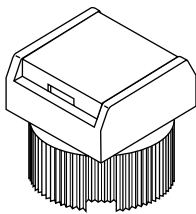
C Round

R Rectangular

K Square

M Round

N Rectangular



Bezel-barrier is an integral part of the switch body.

HOUSING

K

Black

Housing available in black only. The 1-piece body and bezel-barrier have a matte finish.

CONTACT MATERIALS & RATINGS

W

Silver Contacts

Power Level

3A @ 125/250V AC

G

Gold Contacts

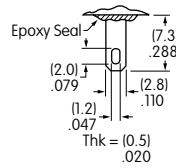
Logic Level

0.4VA max. @ 28V AC/DC max.

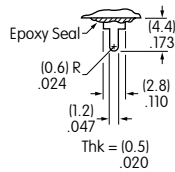
Complete explanation of operating range in Supplement section.

TERMINALS

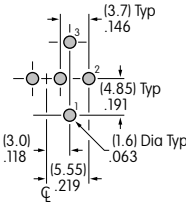
01 Solder Lug/
.110" (2.8mm) Quick Connect



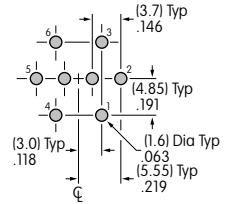
03 Straight PC



Single Pole



Double Pole



INCANDESCENT LAMP & SOLID CAP

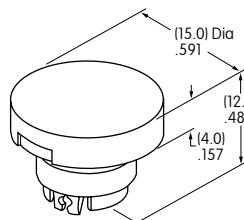
Electrical specifications are determined at a basic temperature of 25°C. Lamp circuit is independent of switch operation.
For dimension drawing of lamp see the Accessories & Hardware section.

| | | | | |
|---|-----------|---------------|---------------|--------|
| AT611  T-1 Bi-pin | | 05 | 12 | |
| | Voltage | V | 5V AC | 12V AC |
| | Current | I | 115mA | 60mA |
| | MSCP | | .150 | .150 |
| | Endurance | Hours | 7,000 average | |
| Ambient Temperature Range | | -25°C ~ +50°C | | |

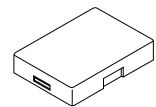
Solid Cap for Incandescent Lamp

Lens/Insert
Colors Available:

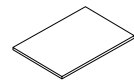
- BB** White/White
- CB** Red/White
- EB** Yellow/White
- FB** Green/White
- GB** Blue/White



AT3002
Round

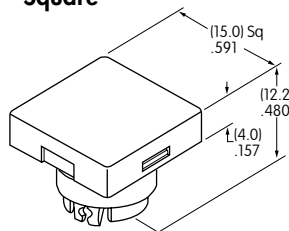


Translucent Colored Lens

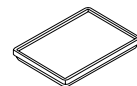
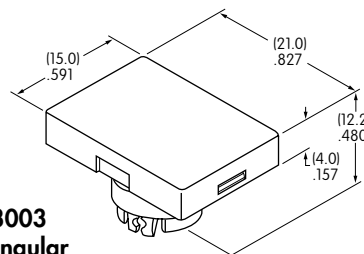


Translucent White Insert

AT3001
Square



AT3003
Rectangular



Translucent White Seal/Filter

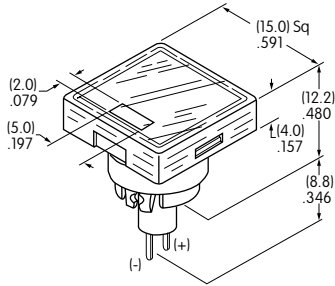


Incandescent Lamp AT611

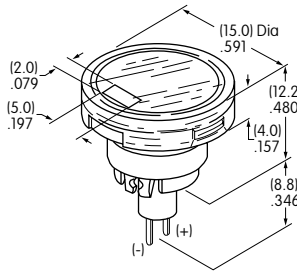
Materials: Polycarbonate (Lens & Insert)
Thermoplastic Elastomer (Seal/Filter)

SPOT ILLUMINATED CAP WITH BUILT-IN LED

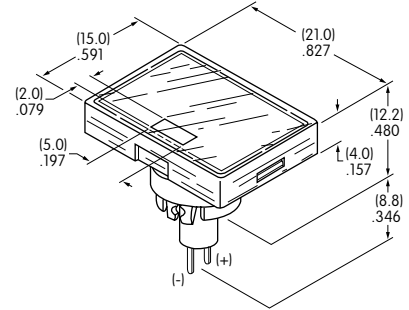
This spot-illuminated cap is factory assembled.



AT3010
Square



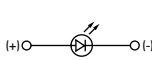
AT3011
Round



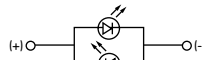
AT3012
Rectangular

| Colors Available: | 02 | 05 | 12 | 24 | |
|--|-------------------|------------|------------|------------|-------|
| 1C Red 1D Amber 1F Green 1CF Red/Green | w/o Resistor | w/Resistor | w/Resistor | w/Resistor | Unit |
| Forward Peak Current | I_{FM} 20 | 15 | 15 | 12 | mA |
| Continuous Forward Current | I_F 15 | 12.5 | 12.5 | 10 | mA |
| Forward Voltage | V_F 2.1 | 5 | 12 | 24 | V |
| Reverse Peak Voltage (not applicable to bicolor) | V_{RM} 5 | 5 | 5 | 5 | V |
| Current Reduction Rate Above 25°C | ΔI_F 0.27 | — | — | — | mA/°C |
| Ambient Temperature Range | -25 ~ +50 | | | | °C |

Without Resistor 2-volt

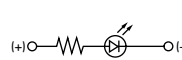


Single Color

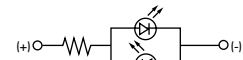


Bicolor

With Resistor 5, 12, 24-volt



Single Color



Bicolor

The electrical specifications shown are determined at a basic temperature of 25°C. LED circuit is isolated and requires external power source. Single color LEDs are colored in OFF state. Bicolor LED is translucent white in OFF state.

If the source voltage exceeds the rated voltage, a ballast resistor is required.

The resistor value can be calculated by using the formula in the Supplement section.

Lens/Insert

Colors Available:

JA Clear/Black

JB Clear/White

JC Clear/Red

JE Clear/Yellow

JF Clear/Green



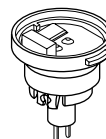
Clear Lens



Colored Insert



Seal



Built-in LED
(integral part
of the cap)

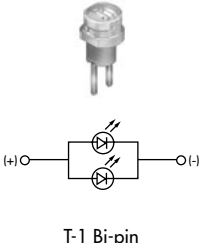
Example part number
when cap is ordered separate from
switch:
AT3010F02JA
for a
Square Spot Illuminated Cap
with Green 2-volt LED without resistor
Clear Lens and Black Insert

Materials: Polycarbonate (Lens & Insert) and Thermoplastic Elastomer (Seal)


BRIGHT LED & LED CAPS

The electrical specifications shown are determined at a basic temperature of 25°C.
 LED circuit is isolated and requires external power source.
 If the source voltage exceeds the rated voltage, a ballast resistor is required.
 The resistor value can be calculated by using the formula in the Supplement section.

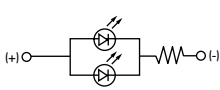
Electrical Specifications for Bright LED without Resistor

| | | | | | | |
|--|---|---|-----------|-------|-------|-------|
| Bright AT628  | Colors Available: 5C Red 5D Amber 5F Green | No Code No Resistor | | | Unit | |
| | LED Colors | | Red | Amber | Green | |
| | Forward Peak Current | I_{FM} | 40 | 40 | 40 | mA |
| | Continuous Forward Current | I_F | 26 | 26 | 26 | mA |
| | Forward Voltage | V_F | 1.9 | 2.0 | 2.2 | V |
| | Reverse Peak Voltage | V_{RM} | 4 | 4 | 4 | V |
| | Current Reduction Rate Above 25°C | ΔI_F | 0.50 | | | mA/°C |
| | Ambient Temperature Range | | -25 ~ +50 | | | °C |

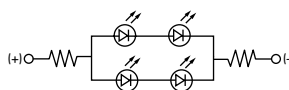
Electrical Specifications for Bright LED with Resistor

| | | | | | | |
|---|---|--|--|--|------|-------|
| Bright AT634  | Colors Available: 5C Red 5D Amber 5F Green | 05 | 12 | 24 | Unit | |
| | Forward Peak Current | I_{FM} | — | — | — | mA |
| | Continuous Forward Current | I_F | 25 | 20 | 10 | mA |
| | Forward Voltage | V_F | 5 | 12 | 24 | V |
| | Reverse Peak Voltage | V_{RM} | 4 | 8 | 16 | V |
| | Current Reduction Rate Above 25°C | ΔI_F | — | — | — | mA/°C |
| | Ambient Temperature Range | | -25 ~ +50 | | | °C |

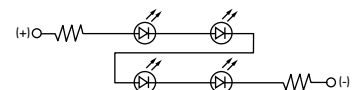
AT634
5-volt,
2-element
with Resistor



AT634
12-volt,
4-element
with Resistor



AT634
24-volt,
4-element
with Resistor

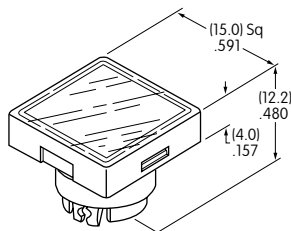


Cap for Bright LED

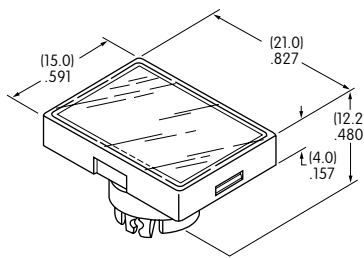
Lens/Insert
Colors Available:

- JB Clear/White
- JC Clear/Red
- JD Clear/Amber
- JF Clear/Green

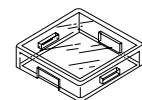
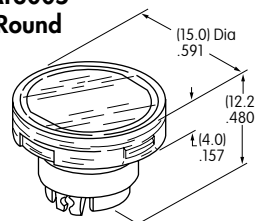
AT3004
Square



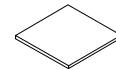
AT3006
Rectangular



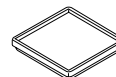
AT3005
Round



Transparent Clear Lens



Translucent Colored Insert



Translucent White Seal/Diffuser




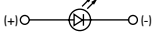

Bright LEDs
AT628 AT634

Materials: Polycarbonate (Lens & Insert)
Thermoplastic Elastomer (Seal/Diffuser)

SUPER BRIGHT LED & LED CAPS

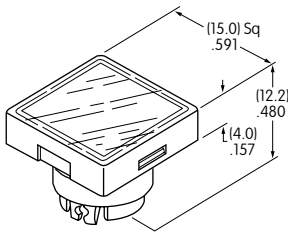
The electrical specifications shown are determined at a basic temperature of 25°C.
 LED circuit is isolated and requires external power source.
 If the source voltage exceeds the rated voltage, a ballast resistor is required.
 The resistor value can be calculated by using the formula in the Supplement section.

Electrical Specifications for Super Bright LED

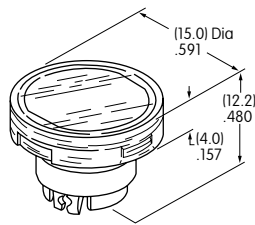
| Super Bright AT625G Blue AT631B White AT632F Green |   | Colors: | 6B | 6F | 6G | Unit |
|---|---|--------------|-----------|-------|------|-------|
| | | | White | Green | Blue | |
|  T-1 Bi-pin | Forward Peak Current | I_{FM} | 30 | 30 | 30 | mA |
| | Continuous Forward Current | I_F | 20 | 20 | 20 | mA |
| | Forward Voltage | V_F | 3.6 | 3.5 | 3.6 | V |
| | Reverse Peak Voltage | V_{RM} | 5 | 5 | 5 | V |
| | Current Reduction Rate Above 25°C | ΔI_F | 0.50 | | | mA/°C |
| | Ambient Temperature Range | | -25 ~ +50 | | | °C |

Cap for Super Bright LED

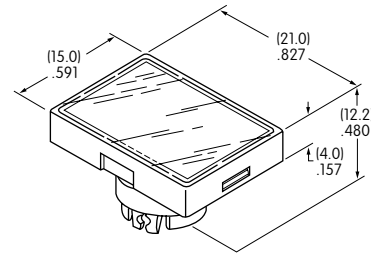
AT3014
Square



AT3015
Round

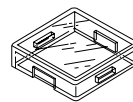


AT3016
Rectangular

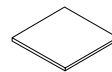


Lens/Insert
Colors Available:

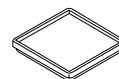
JB Clear/White



Transparent Clear Lens



Translucent White Insert



Translucent White Seal/Diffuser





Super Bright LEDs
AT625 AT631
AT632

Materials: Polycarbonate (Lens & Insert)
Thermoplastic Elastomer (Seal/Diffuser)

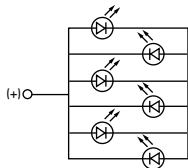
BICOLOR LED & LED CAPS

The electrical specifications shown are determined at a basic temperature of 25°C.
 LED circuit is isolated and requires external power source.
 If the source voltage exceeds the rated voltage, a ballast resistor is required.
 The resistor value can be calculated by using the formula in the Supplement section.

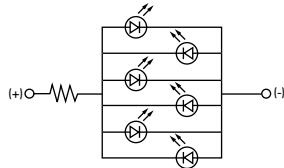
Electrical Specifications for Bicolor LED

| Bicolor AT621  Red/Green  T-1 1/2 Bi-pin | Bicolor LED is translucent white in OFF state. | | 02 | 05 | 12 | 24 | Unit |
|--|--|--------------|-----------|----|----|----|-------|
| | Forward Peak Current | I_{FM} | 60 | 60 | 20 | 12 | mA |
| | Continuous Forward Current | I_F | 45 | 45 | 15 | 10 | mA |
| | Forward Voltage | V_F | 2.1 | 5 | 12 | 24 | V |
| | Current Reduction Rate Above 25°C | ΔI_F | 0.80 | — | — | — | mA/°C |
| | Ambient Temperature Range | | -25 ~ +50 | | | | °C |

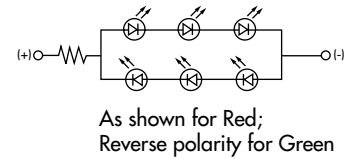
AT621
 Bicolor LED
 2-volt
 6-element
 w/o Resistor



AT621
 Bicolor LED
 5-volt
 6-element
 with Resistor

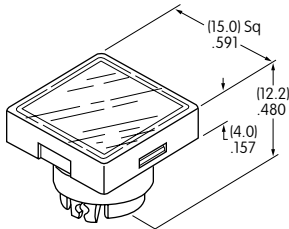


AT621
 Bicolor LED
 12 & 24-volt
 6-element
 with Resistor

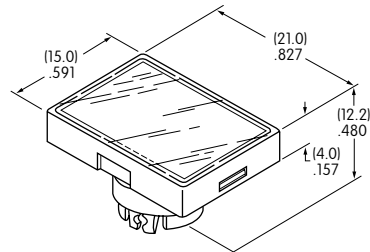


LED Caps

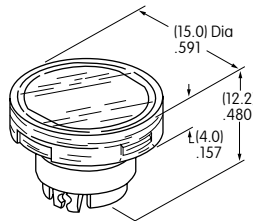
AT3004
 Square



AT3006
 Rectangular

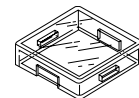


AT3005
 Round

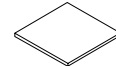


Lens/Insert
 Colors Available:

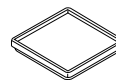
 Clear/White



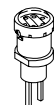
Transparent Clear Lens



Transparent White Insert



Translucent White Seal/Diffuser



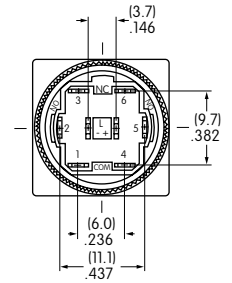
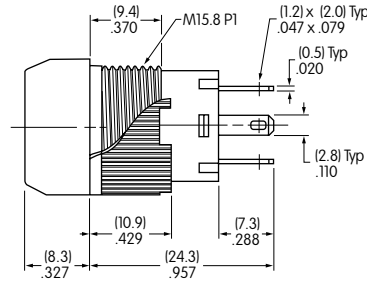
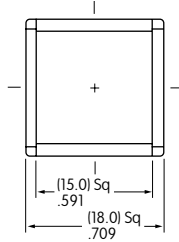
Bicolor LED AT621

Materials: Polycarbonate (Lens & Insert)
 Thermoplastic Elastomer (Seal/Diffuser)

TYPICAL SWITCH DIMENSIONS

Square • Bushing Mounting

Single & Double Pole

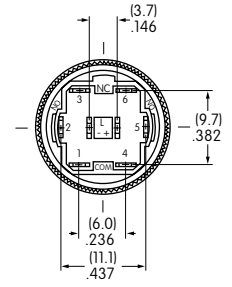
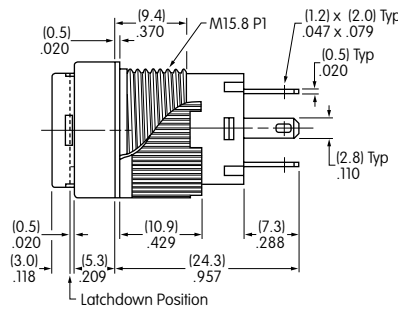
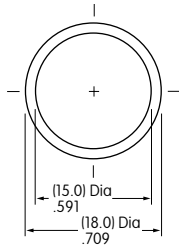


YB15KW01-12-CB

Single pole models do not have terminals 4, 5, & 6.

Round • Panel Seal

Single & Double Pole

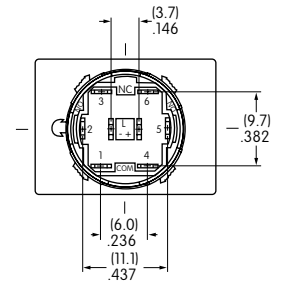
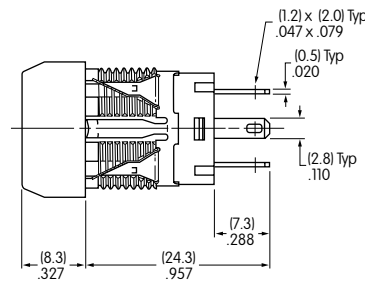
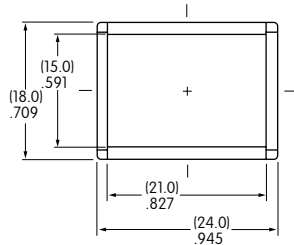


YB26WCKW01-12-EB

Single pole models do not have terminals 4, 5, & 6.

Rectangular • Snap-in Mounting

Single & Double Pole



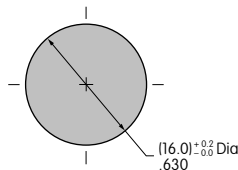
YB15NKW01-5C-JC

Single pole models do not have terminals 4, 5, & 6.

PANEL THICKNESS & CUTOUTS

Bushing & Panel Seal Mount

Panel Thickness
.020" ~ .197"
(0.5mm ~ 5.0mm)



Snap-in Mount

Panel Thickness
.039" ~ .138"
(1.0mm ~ 3.5mm)

